EDITORIAL ARTICLES.

THORNTON'S RECENT CASES OF HEPATIC SURGERY.[1]

A paper of no little interest by Mr. Knowsley Thornton was read before the medical society of London, in March. In this paper the author presented his experience of hepatic surgery up to that time in continuation of previous reports, which have been duly abstracted in this journal. Nine cases are detailed, in seven of which gall stones were diagnosed as the cause of illness, finding and removing them in seven, and finding and removing hydatids in one.

1. A woman, æt. 32, had suffered several attacks during a number of years, which had been ascribed to gall stones. The description given by the patient and the well marked renal and vesical symptoms which accompanied the attacks, as well as examination of the abdomen, tended, however, to indicate right renal colics; there was a rounded tender swelling projecting from under the false ribs on the right side in front, and giving an impulse right back into the loin, and, though there was some crepitus over the usual site of the gall bladder, there was no swelling there and no very marked tenderness. An incision over the swelling and rather to its inner side, however, discovered that it was the gall-bladder completely enclosed in matted omentum and intestines; a little bile-stained mucus having been drawn off by the aspirator, it was packed carefully round with carbolized sponges, and, through a small vertical incision, two large stones and some debris were extracted with forceps and lithotomy scoop Examination of the right kidney was made very difficult by the adhesions; it was large and hard, but not obviously diseased. The edges of the gall-bladder were

[1]Cases of Hepatic Surgery. By J. KNOWSLEY THORNTON, M.D. (London), *London Lancet*, March 7, and April 4 and April 11, 1891.

sutured into the abdominal incision and drained in the usual way, and the patient made an excellent recovery.

2. A woman, æt. 37, had two severe attacks of colic; she had never been jaundiced, but the stools had been pale since the first attack. A healthy gall bladder was opened by the usual incision, disclosing two good-sized stones in the common duct. The cystic duct had contracted behind the stones so that it could not be dilated; the stones were needled into fine pieces by a needle through the wall of the duct, the fragments being further crushed with a pair of nasal polypus forceps, the blades of which were padded by rubber tubing stretched over them. The attempts at dilatation had so much injured the gall-bladder, that it was now decided to remove it. After the operation the patient was distinctly jaundiced, and for eight or nine days there was a good deal of bile in the urine, but the first motion passed was brown, and the fragments of stone began to pass on the eleventh day. The patient made a good recovery in a month.

3. A woman, æt, 40, had been suffering from symptoms attributable to the gall-bladder for six years, and was in a very enfeebled condition. Stone impacted in the common duct was diagnosed and, in view of her serious state of health, immediate operation undertaken. A large angular stone was removed from the cystic duct, after being broken, and another was found impacted in the common duct just below the cystic duct. The stone was then needled into fragments through an incision in the common duct, and as the fragments could not be extracted through any reasonable opening in the duct wall, the incision was closed, leaving them to pass *per vias naturales*. The edges of the gall bladder were stretched into the external wound, and the usual drainage provided, together with a glass tube passed into the peritoneal pouch below the liver. The patient made an uninterrupted progress to complete health.

4. A woman, æt. 35, presented a lump just below the liver, with pain, first noticed six years previously, just after child-birth. A number of gall-stones could be distinctly felt. These were removed by a simple cholecystotomy, the gall-bladder sewed into the abdominal incision and drained. A rapid and complete recovery ensued.

5. A woman, æt. 32, experienced sudden severe pain in recurrent paroxysms for an entire day followed by jaundice and yellow urine. Five months later, during a similar attack, a tumor was found in the neighborhood of the gall-bladder, and her medical attendant aspirated two pints of bilious fluid, after which he referred her to Mr. Thornton. The tumor refilled rapidly and the operator exposed it, and, after aspirating two and a half pints of bilious fluid, opened it and removed a quantity of hydatids, learning that it was the gall gladder. There were many adhesions all around it and a separate hydatid cyst was removed from the omentum; as there was fluid in the pelvis, a counter-opening was made over the pubis through which the peritoneum was drained by a glass tube. The gall-bladder was treated in the usual way, the pelvic tube was removed in thirty-six hours, the gall-bladder ceased discharging on the twenty third day, and complete recovery ensued.

6. A woman, æt. 43, much emaciated and deeply jaundiced, with the peculiar earthly blui-h tinge often accompanying malignant disease, presented an indefinite swelling and dullness in the region of the gall-bladder, but more to the left than usual; the liver was large and hard with obvious matting of the parts below it. She had had the first colic nine months before, with severe pain at intervals for two weeks, followed by violent vomiting, complete anorexia and green jaundice. Impacted gall-stones was diagnosed and malignant complications feared. Abdominal section revealed a liver so large that the gall-bladder and the ducts were quite covered, much adhesion of omentum and intestines and a large oval stone impacted in the common duct. Failing to define the gall bladder accurately, and it being impossible to get at the stones through the contracted cystic duct, it was decided to remove by incision of the common duct. This was much hampered by the large liver, the work being necessarily done entirely by touch deep in the abdomen, guiding the knife on the left index finger. The first incision was followed by such a rush of blood that the vena cava was suspected, but examination through a small Ferguson's glass speculum showed that it proceeded from a vein in the adherent omentum, which was easily secured. The stone was

loosened with difficulty on account of its adhesion to the lining of the duct over a great part of its surface. The opening in the duct was closed by six fine interrupted silk sutures and a continuous one over all, the omentum being used to strengthen the closure. The peritoneum was drained by a glass tube. In spite of serious shock, the patient rallied quickly, the wound healed in a fortnight, and after three weeks she was discharged, with only a slight jaundice, which disappeared five weeks later.

7. A woman, æt. 36, had long suffered from inactive liver with attacks of pain in the right hypochondrium, which during the last six months had become very severe and clearly due to the attempted passage of gall stones, and accompanied by vomiting, jaundice and emaciation. On operation two stones were found one above the other in the common duct. The gall-bladder was so shrunken that it was recognized with difficulty and it was decided at once to open the common duct, remove the stone and suture the opening, which was not easily done owing to the matting of the parts by adhesions; fearing for the security of the suture, a rubber tube was passed into the pouch at the bottom of which it lay and brought out through the upper part of the abdominal incision, a glass tube being also passed into the sac of Douglas through a counter-opening above the pubes; the latter was hardly required but a heavy discharge of bile stained serum flowing from the rubber tube for many days after the operation showed the wisdom of the precaution. Rapid and perfect recovery ensued.

8. A woman, æt. 34, had long suffered from attacks of pain around the back and in the neighborhood of the liver, lasting a few days and then passing off. A lump was presented in the region of the gall-bladder, said at times to be irregular in outline and so mobile that it was thought to be in the omentum and of malignant nature; this diagnosis was strengthened by gradual emaciation with constant pain and by her mother's, having died of internal cancer. When first seen a smooth oval tumor was found about as large as a turkey's egg and with all the characters of a distended gall-bladder. Seen again after a time, a much smaller, harder and more sensitive swelling was found, confirming the diagnosis but increasing the fear of malignant disease. Section

showed a very hard and thickened gall-bladder, which was laid open but no stone found. The adhesions around it were so firm that it was difficult properly to explore the ducts from their peritoneal surface. They were so firm that on account of the ease with which the gall-bladder was cut, it was decided not to fasten it to the incision, but to suture it carefully and drop it in. The patient did badly from the first and died on the third day with septic symptoms. Autopsy showed that a large quantity of bilious fluid had escaped into the peritoneum through the giving way of the suture in the gall bladder wall, and close to the opening lay a small gall-stone free in the peritoneal cavity—a very small one to have caused so much trouble and such great thickening of the gall-bladder.

9. A woman, æt. 34, had for several years been subject to colics, which latterly had become recurrent at frequent intervals. Abdominal section revealed the contents of the abdomen so matted together that the head of the pancreas was at first mistaken for a thickened gall-bladder, which was at last, by carefully separating some fresh adhesions between the stomach, the omentum and the right lobe of the liver, found deeply placed and packed with gall-stones. In the search a small abscess under the edge of the liver was opened giving exit to about an ounce of cheesy pus. The clasping of the stones was long and difficult and required the aid of various scoops and forceps. As in Case 7, it was found impossible either to remove the gall-bladder, suture it or stitch it into the abdominal opening, so a rubber tube was simply passed to the bottom of the gall-bladder and brought out through the abdominal wound; the gall-bladder being thus left open to the general peritoneum, a counter-opening was made above the pubis and the pouch of Douglas also drained with a glass tube, and the patient made an excellent recovery.

At first sight it seems very dangerous to leave the gall-bladder open, but these two cases show that, with due care in the arrangement of the tube, and with auxiliary drainage of the pelvis, it may, when necessary, be done. In both cases the wound in the gall bladder was slow in closing, due to the wide separation of its edges, but there was no evidence of any serious leakage from the gall-bladder into the peri-

toneum, though the discharge of bile-stained mucous through the rubber tube was very great from the first. The author supposes that, when the abdominal incision is sutured and the abdomen well strapped up, the adherent viscera around the gall bladder or duct press up to the parietal peritoneum and the fluids find it easier to escape through the open tube than to spread into the peritoneum between the surface of these structures; then in a very short time, a firm wall is formed all around the tube by the adhesion of neighboring surfaces.

During the period occupied by the foregoing cases Mr. Thornton also performed five exploratory operations in connection with hepatic disease. In the first case the results were negative owing to the extreme matting of the parts. In the second, a hard tumor in the region of the gall-bladder was found to be malignant. The third was also negative and the trouble has recurred leading to a suspicion that a stone might have been overlooked. In the fourth case the symptoms were due to a tumor, probably gummatous, in the location of the gall-bladder. In the fifth case no gall stones were found, and the wound was closed after dividing some adhesions; the patient was relieved.

In considering the series of cases, the operator thought the results good, and amply justifying the operative measures. At the same time there is sufficient uncertainty and failure to show that future efforts should be directed to a more perfect diagnosis. With regard to gall-stones the chief points to be noted are the sudden nature of the onset of pain and its equally sudden departure, the way in which it travels round the body and through into the back at the angle of the scapula, and the sense of constriction round the region of the diaphragm. The presence of a mobile, pear-shaped tumor in the situation of the gall-bladder or to one or other side of that situation, which rises and falls with respiration, variations in size and tension of this swelling may make diagnosis pretty certain. These symptoms, suddenly complicated by jaundice, especially if a swelling previously present disappears, make it pretty certain that the stone has passed through the cystic duct and become impacted in the common duct.

In these cases three entirely new departures in hepatic surgery were made:

1. Direct incision of the common duct and removal of the stone with complete suture of the opening without opening the gall bladder.

2. Incision into the common duct, needling the stone into fragments and closing the duct over them so that they must find their own way into the duodenum.

3. Leaving the gall bladder open in the peritoneum with efficient provision for drainage through the abdominal incision in cases in which it is impossible to suture it into the abdominal wound, and not advisable to attempt complete intra-peritoneal suture.

In the latter case, and wherever fouling of the peritoneum was possible, he urged a counter-opening and drainage as in his seventh and ninth cases. JAMES E. PILCHER.